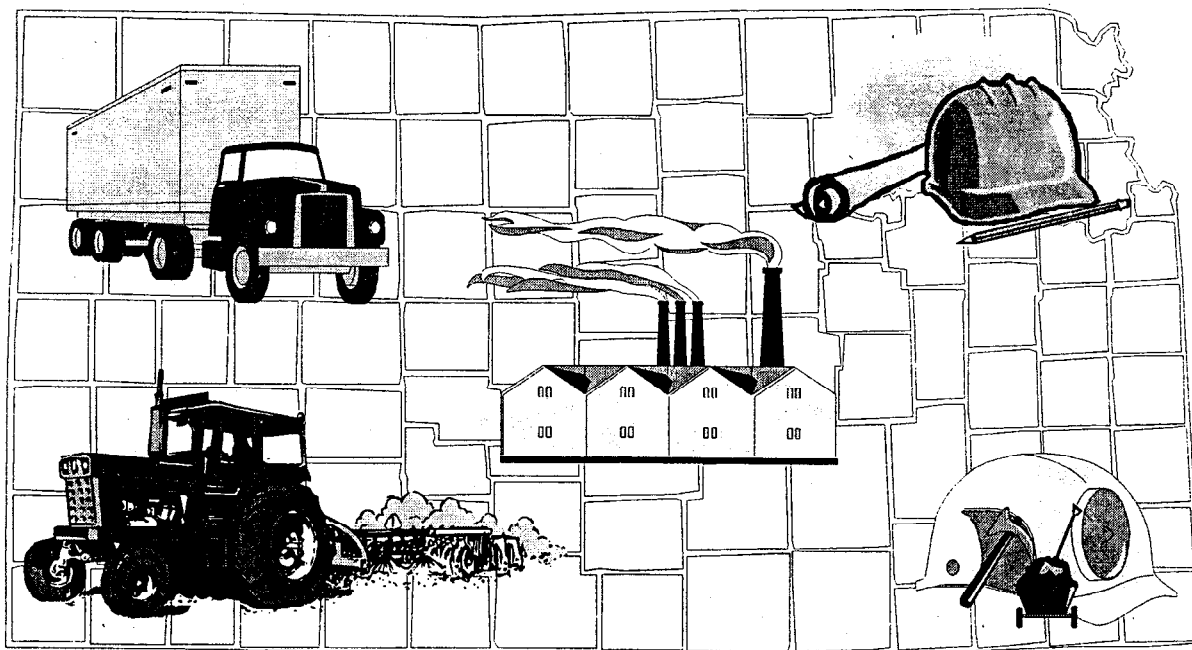


FATAL OCCUPATIONAL INJURIES KANSAS, 1997



Kansas Department of Health and Environment
Landon State Office Building, 900 SW Jackson, Topeka, KS 66612
www.kdhe.state.ks.us/ches

FATAL OCCUPATIONAL INJURIES KANSAS, 1997

Bill Graves, Governor

**Clyde D. Graeber, Acting Secretary
Kansas Department of Health and Environment**



Prepared by
Kansas Department of Health and Environment
Center for Health and Environmental Statistics
Office of Health Care Information

In cooperation with
the U.S. Department of Labor Bureau of Labor Statistics

Kansas Department of Human Resources
Division of Worker's Compensation

and

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INTRODUCTION

Fatality information appearing in this report was collected through the Census of Fatal Occupational Injuries (CFOI) program, a cooperative agreement between the U.S. Department of Labor, Bureau of Labor Statistics (BLS) and the Kansas Department of Health and Environment, Health Care Information. The CFOI program was developed by BLS to provide a comprehensive, accurate, descriptive and accessible census of work related fatalities. The program was piloted for the nation in 1988 and Kansas joined the program in 1991. The information presented in this publication covers injury fatalities that occurred in Kansas in 1997.

Under the CFOI program, to be in scope for a particular state, the incident leading to the death, but not necessarily the death itself, must have occurred in that state. For example, if a worker injured in a work-related incident in Kansas were to die in another state, the case would still be in scope for Kansas. On the other hand, a worker who dies in Kansas from an injury suffered in another state would not be included in the statistics for Kansas but rather in the state in which the injury occurred.

Although CFOI was developed to obtain an accurate count of fatal injuries, the program also collects information on occupational illnesses. Because of the latency period of many occupational illnesses, it is difficult to compile an accurate count using CFOI methodology. Also, as fatal illnesses tend to be disputed as to work-relationship, a census is not attainable within the time frame set forth in the CFOI program.

Information illustrated by the CFOI program are useful in:

- ▶ tracking trends of workplace hazards
- ▶ targeting high hazard work conditions and practices
- ▶ establishing priorities for safety inspections and follow-up visits
- ▶ identifying standards requiring stricter enforcement
- ▶ finding areas where new standards may be needed

Economists, statisticians, epidemiologists, safety specialists, business and government executives, news media and program managers, as well as many other groups and individuals have found this publication to be quite useful.

One of the criterion for publication requires that three or more incidents of a fatality must have occurred in a specific category before they may be published in a table. If numbers are omitted, and noted as such, it is because they did not meet publication requirements.

Copies of this report, as well as additional information, may be obtained by contacting the Kansas Department of Health and Environment at the address, phone, or fax number listed below. This report is also available in an electronic form from KDHE or by accessing the KDHE home page at "<http://www.ink.org/public/kdhe>".

If you desire a copy of this publication in an alternative form because of a disability, contact our office at the address listed below.

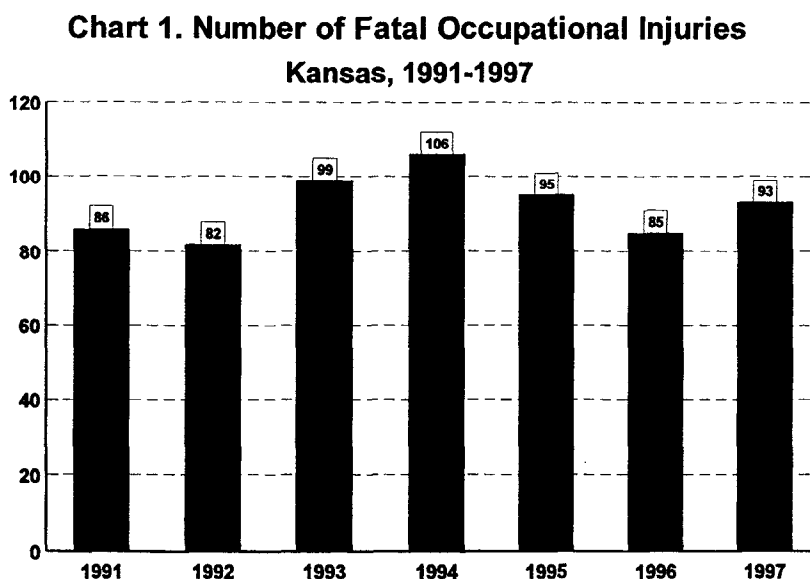
Kansas Department of Health and Environment
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SECTION ONE

CHARTS

HIGHLIGHTS, 1991- 1997

There were 93 fatal occupational injuries occurring in Kansas in 1997. Looking at historical data, the 1997 figure falls in the middle with a low of 82 occurring in 1992 and a high of 106 occurring in 1994. An unusually low number of fatal injuries in the construction industry accounted for the low total in 1992 while an extremely high number of fatal occupational injuries in the retail industry contributed to the high total in 1994.(Chart 1, Chart 2, Table 1)



Although the agriculture industry experienced more deaths in 1997 than in 1996, the 1997 figure of 22 deaths was still considerably lower than the 36 deaths that occurred in 1993. (Chart 2, Table 1)

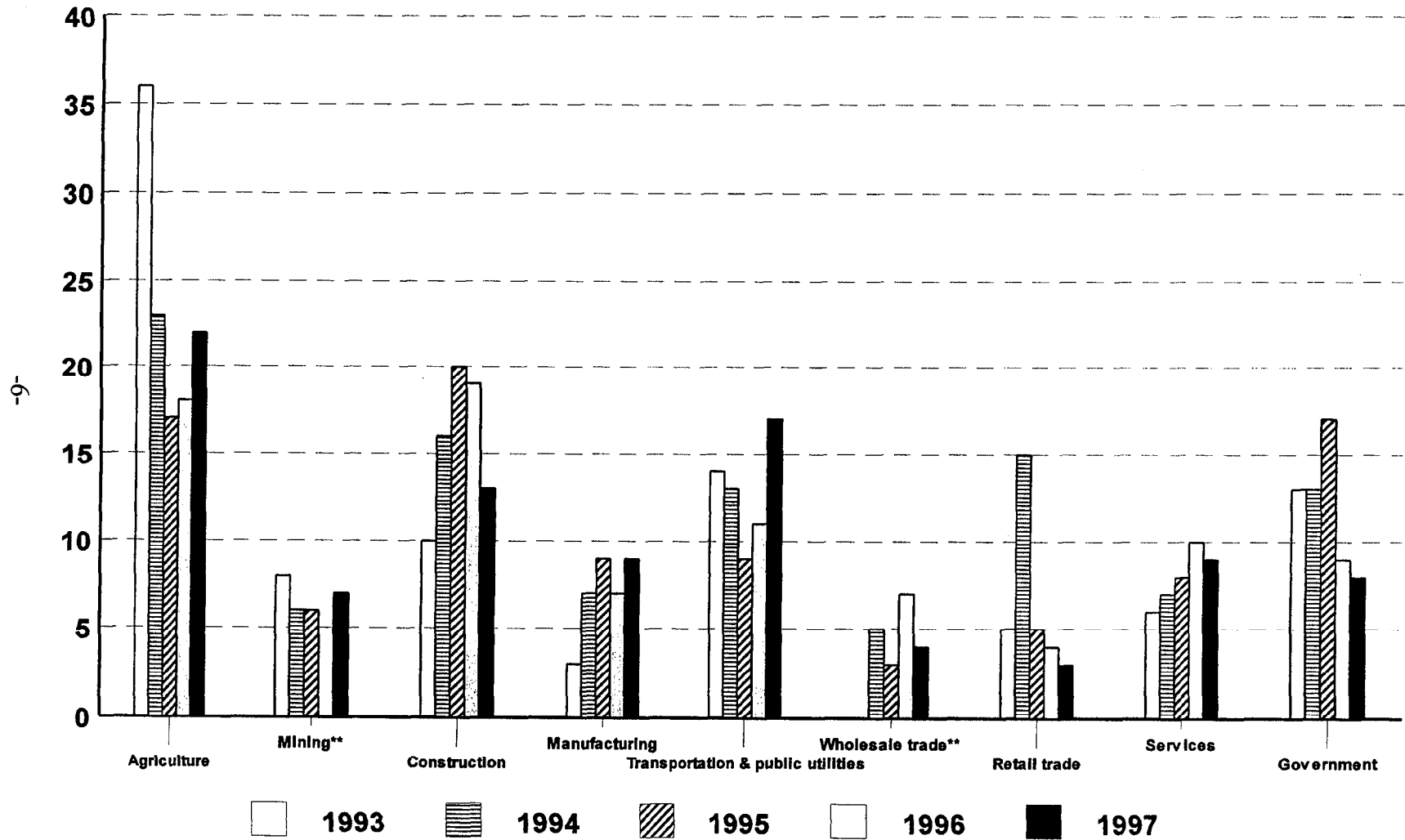
After an unusually low number of deaths occurring in 1996 (less than three) the number of fatal occupational injuries in the mining industry was 7 in 1997, similar to 1993, 1994, and 1995 incidences of 8, 6, and 6 respectively. (Chart 2, Table 1)

The number of fatal occupational injuries in the construction industry dipped to 13 in 1997, more than the low of 8 in 1992 but substantially fewer than the 20 and 19 occurring in 1995 and 1996 respectively. (Chart 2, Table 1)

The transportation and public utilities industry experienced an all time high of 17 fatal occupational injuries in 1997. This compares to a low of 9 in 1995. (Chart 2, Table 1)

The number of fatal occupational injuries in the retail industry continued to decline from the high of 15 in 1994 to a low of 3 in 1997. (Chart 2, Table 1)

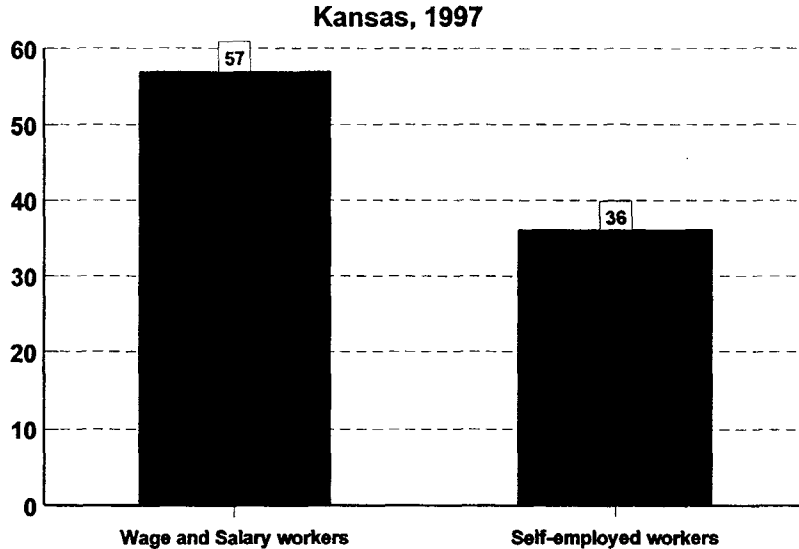
**Chart 2. Number of Fatal Occupational Injuries
By Industry*, Kansas 1993 - 1997**



DEMOGRAPHIC HIGHLIGHTS

Of the 93 workers who lost their lives due to occupational injuries in 1997, 57, or 61%, were wage and salary workers. The remaining 36, or 39%, were self-employed. (Chart 3, Table 2)

Chart 3. Fatal Occupational Injuries by Employee Status



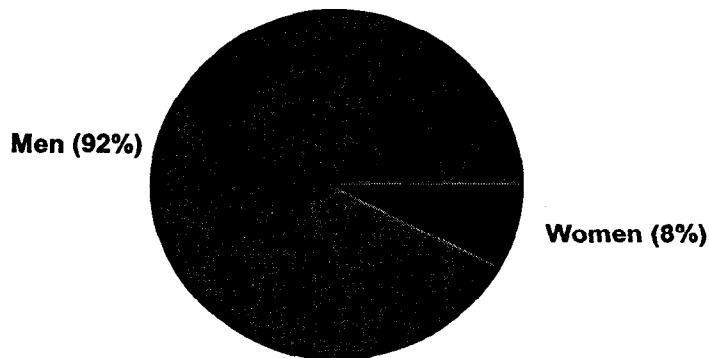
*May include volunteers and other workers receiving compensation.

**Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.

Occupational fatalities occurred much more often to men than to women in Kansas in 1997. The 86 men accounted for 92% of all fatalities in Kansas compared to the 7 women, which accounted for only 8%. (Chart 4, Table 2) Of the 7 women who died working, 5 were killed in transportation fatalities, one from a fall, and one was a homicide.

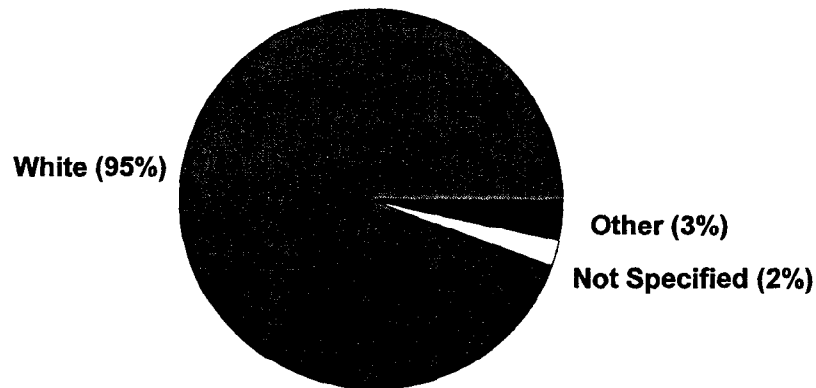
Chart 4. Fatal Occupational Injuries by Sex

Kansas, 1997



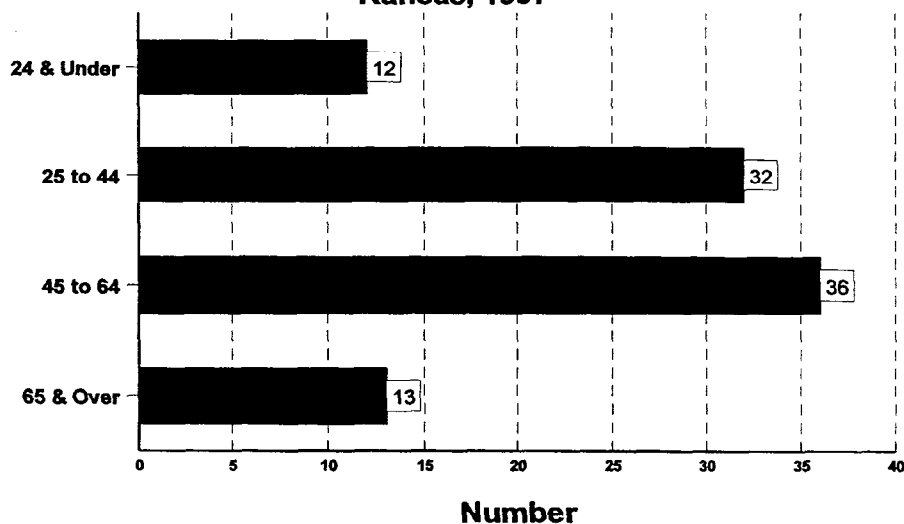
Of the 93 occupational fatalities for which race was known, 88, or 96% were white. Five workers were of Hispanic origin, but may have been of any race. (Chart 5, Table 2)

Chart 5. Fatal Occupational Injuries by Race
Kansas, 1997



The greatest number of fatal occupational injuries (36) occurred in the 45 to 64 age-group, accounting for 39% of the total. Second, was the 25 to 44 age-group with 34% or 32 fatalities. Ranking third was the 65 and over age-group with 14% or 13 deaths. Following closely, the 24 and under age-group had the least with 13% or 12 victims. (Chart 6, Table 2)

Chart 6. Fatal Occupational Injuries by Age-Group
Kansas, 1997

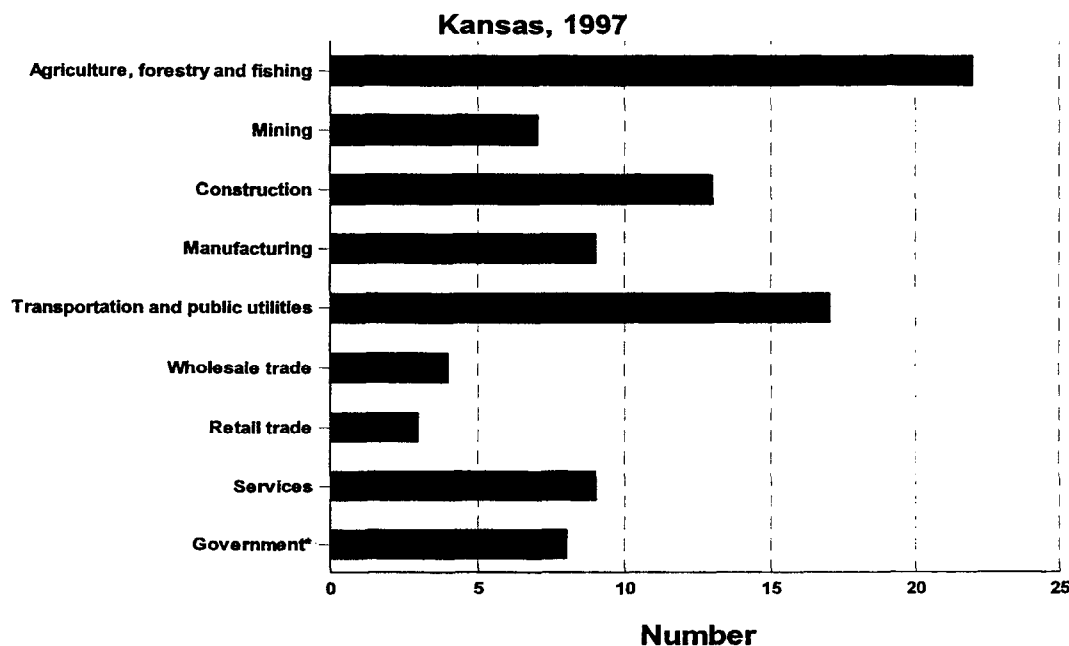


INDUSTRY

After falling below construction in 1995 and 1996, the agriculture, forestry, and fishing industry once again ranked highest in the number of fatal occupational injuries in 1997 with 22, or 24% of the total. Seventeen of the 22 deaths in the industry occurred in the agricultural production of crops industry. Agricultural production of livestock accounted for the remaining 5. (Chart 9, Table 1, Table 4)

Usually ranking third, transportation and public utilities was a close second in 1997 with 17 fatal occupational injuries, or 18% of the total. For this industry 1997 was the most hazardous year yet. The closest year to 1997 would be 1993 when this industry incurred 14 fatalities. All but 3 of the fatal incidents in this category occurred in trucking and warehousing. These 11 occupational deaths were in trucking and courier services, except air. Railroad transportation accounted for the remaining 3 fatalities in this industry. (Chart 9, Table 1, Table 4)

Chart 7. Fatal Occupational Injuries by Industry



*Includes fatalities to workers employed by governmental organizations regardless of industry.

Coming in third, was the construction industry with 13 occupational deaths, or 14% of the total. 1997 would be considered a relatively safe year compared to the two years before when this industry saw 19 deaths in 1996 and 20 in 1995. Occupational fatalities in this industry was split almost down the middle in 1997 with general building contractors claiming 5 of the fatal injuries and special trade contractors claiming 6 (Chart 9, Table 4)

The Manufacturing industry and the services industry both accounted for 9 people in 1997, or 10% of the total. This number is about average for the manufacturing industry which has maintained a relatively steady number of deaths with the exception of 1992 which saw an unusually high number of deaths with 12 and 1993 with an unusually low number of 3. While one less worker died in the service industry in 1997 than in 1996, the number of deaths occurring in this industry in recent years continues to be nearly twice as high as the 5 that occurred in 1991. (Chart 9, Table 1, Table 4)

Government employees suffered 8 losses due to fatal injuries while working in 1997. This figure historically has been elevated as high 17 in 1995, and as low as 6 in 1991. The type of government employees who lost their lives on the job breaks down as 2 state, 3 county, 2 school district, and 1 township. (Chart 9, Table 4)

The mining industry in Kansas suffered 7 losses in 1997. Oil and gas extraction accounted for 6 out of the 7. (Chart 9, Table 4)

Wholesale and retail trades took the lives of 4 and 3 people respectively. Three out of the 4 victims who worked in wholesale worked in the farm-product raw materials category. (Chart 9, Table 4)

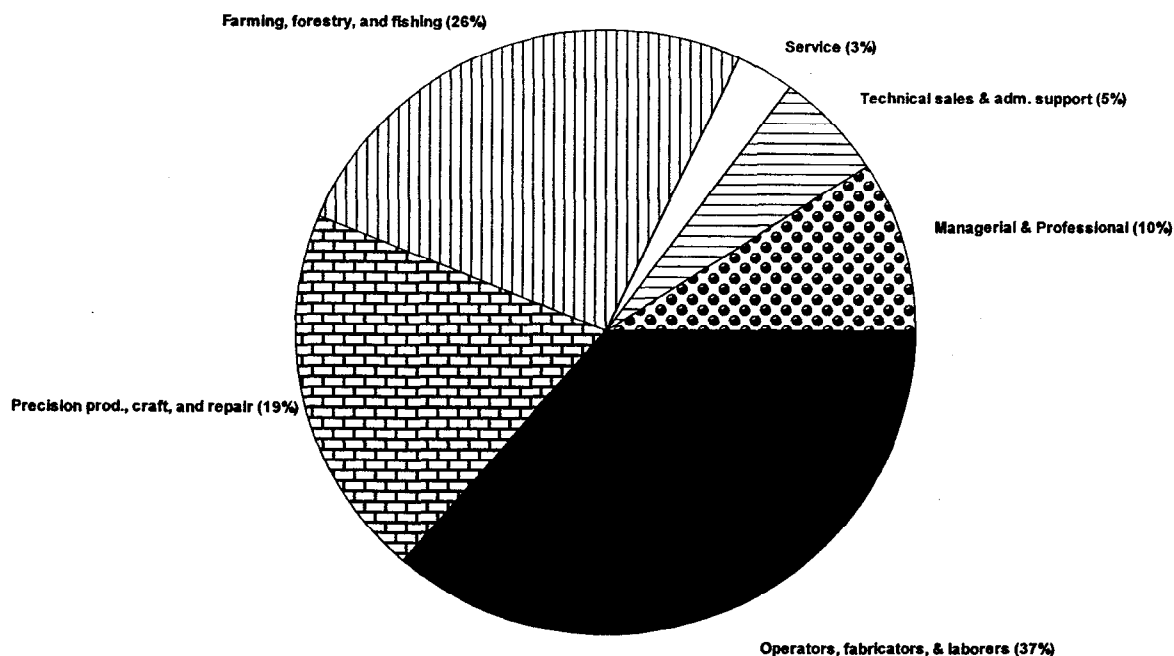
OCCUPATION

Operators, fabricators, and laborers suffered the most losses in 1997 with 34 occupational fatalities, or 37% of the total. This figure is second only to 1993 when this occupational category suffered 35 fatalities. Transportation and materials moving occupations experienced the majority (22) of those casualties. The victims included 16 motor vehicle operators, 3 railroad transportation operators, and 3 material moving equipment operators. Construction laborers, and non-construction laborers accounted for 5 and 3 fatalities respectively. (Chart 10, Table 1, Table 5)

Ranking second, the farming, forestry, and fishing occupations endured 24 fatal occupational injuries in 1997 for 26% of the total. This is the highest this occupation has ever seen since Kansas began collecting CFOI data. Farmers, except horticultural accounted for 18 fatal injuries. Other agricultural and related occupations endured the final 6. (Chart 10, Table 1, Table 5)

Precision production, craft, and repair ranked third with 18, at 19%. There were 4 more deaths in this occupation in 1997 than there were in 1996. Overall, 1991 with 19 and 1994 with 20 both had higher fatality frequencies. This occupation was balanced amongst its subdivisions. Mechanics and repairers endured 5 losses, the construction trades had 7, extractive occupations suffered 3, and precision products also experienced 3. (Chart 10, Table 5)

**Chart 8. Fatal Occupational Injuries by Occupation
Kansas, 1997**



The managerial and professional occupations experienced the same number of losses as they did in 1996 with 9 occupational fatalities, or 10% of the total. Executive, administrative, and managerial occupations claimed the most lives (6) and the professional specialty occupations accounted for the other 3. (Chart 10, Table 1, Table 5)

The technical sales and administrative support category had 5 fatal occupational injuries in 1997. Three of the 5 were with sales related occupations. (Chart 10, Table 1, Table 5)

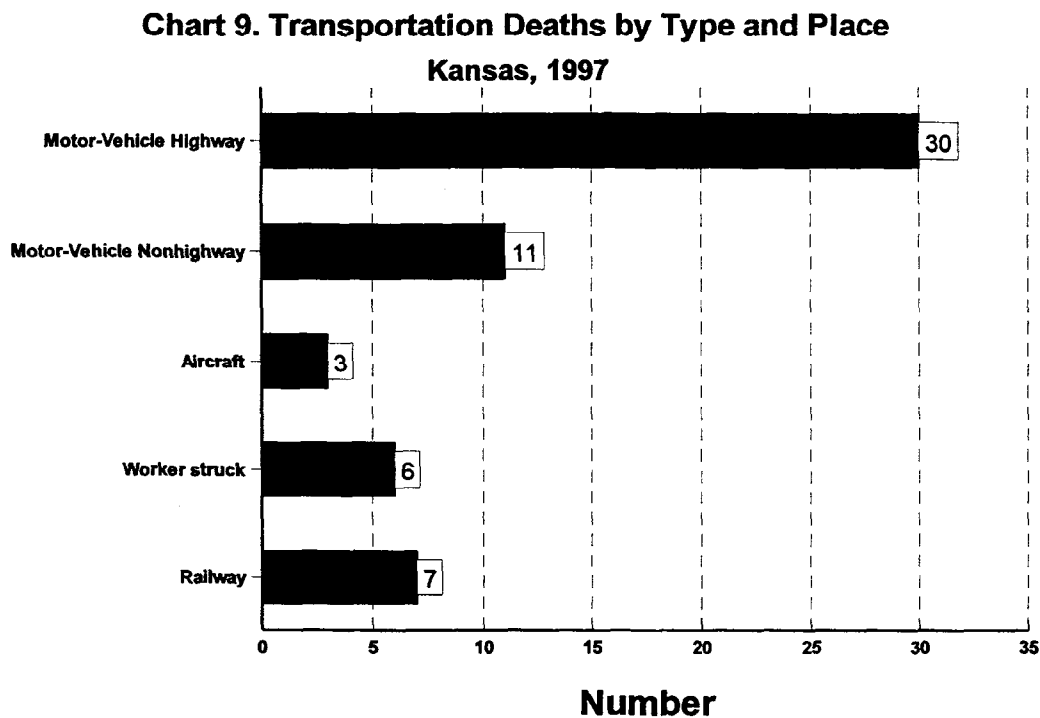
Last is the service occupation category with only 3 deaths in 1997, the lowest since Kansas began collecting CFOI data. This occupation has suffered as many as 10 deaths in the past (1995). (Chart 10, Table 1, Table 5)

EVENT or EXPOSURE

The event claiming the most lives lost due to occupational injuries was once again transportation events. 1997 marked the highest year yet since Kansas began collecting CFOI data with 57 such events, comprising 61% of the total fatalities. The next closest year was 1993 with 54. Of the 57, 30 were highway incidents. Of that, 13 were collisions between vehicles, a vehicle struck a stationary object 3 times, and 14 were non-collision incidents. Thirteen of the 14 non-collision incidents were jack-knife/overtake incidents. (Chart 7, Table 3)

Non-highway incidents (farm, industrial premises) occurred 11 times (12%). Ten of those were non-collision incidents including three incidents where the victim fell from and was struck by a vehicle and six incidents involving overturned vehicles. (Chart 7, Table 3)

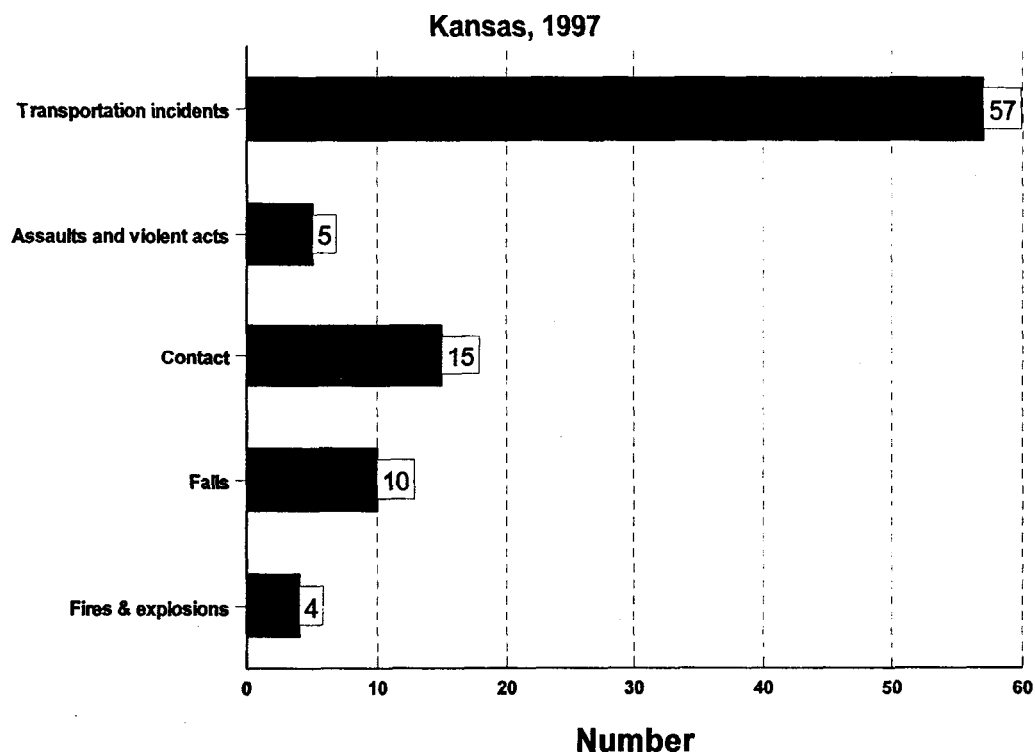
There were also 3 aircraft fatalities, 6 incidents where a worker was struck by a vehicle or mobile equipment, and 7 railway fatalities, the highest ever in Kansas's CFOI history.



Contact with objects and/or equipment came in a distant second for occupational fatalities in 1997 with 15 incidents, accounting for 16% of the total. Being struck by an object occurred 6 times and being caught in or compressed by an object/equipment occurred 7 times. (Chart 8, Table 3)

Falls ranked third as the most common cause of occupational fatalities. Ten people in Kansas fell to their death while working on the job in 1997, comprising 11% of the fatal occupational injuries. All falls in 1997 were falls to lower levels. Four people fell from roof tops and 3 were falls from a scaffold or staging. (Chart 8, Table 3)

Chart 10. Fatal Occupational Injuries by Event or Exposure



Ranking fourth, assaults and violent acts took the lives of 5 workers in Kansas in 1997. This number accounts for 5% of the total. There were 2 homicides, and 1 suicide. Unlike 1996, where there were no such deaths in the retail industry, the 2 homicides in 1997 were both incidents in which a robbery at a retail establishment resulted in an employee being fatally shot with a firearm during the holdup. There was also one stabbing of a law enforcement officer, one self-inflicted hanging, and one of unknown causes. (Chart 8, Table 3)

Last was fires and explosions, in which 4 people suffered fatal injuries in 1997. Explosions were the cause of death in all 4 accidents. Three of the 4 died in a single incident. There were no deaths due to fire. (Chart 8, Table 3)

Chart 11. Fatal Occupational Injuries by Month of Injury
Kansas, 1997

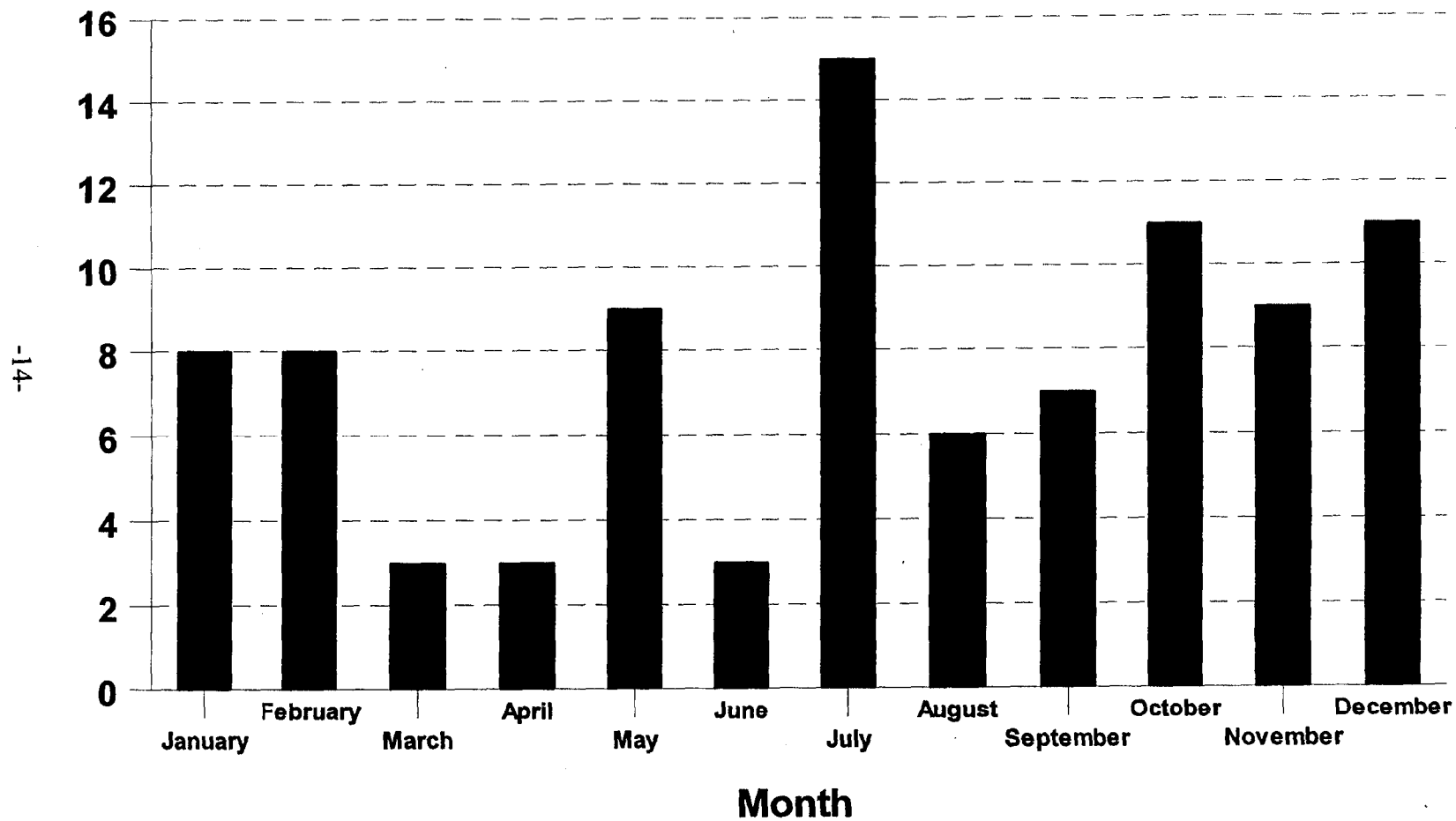


Chart 12. Fatal Occupational Injuries by Day of the Week
Kansas, 1997

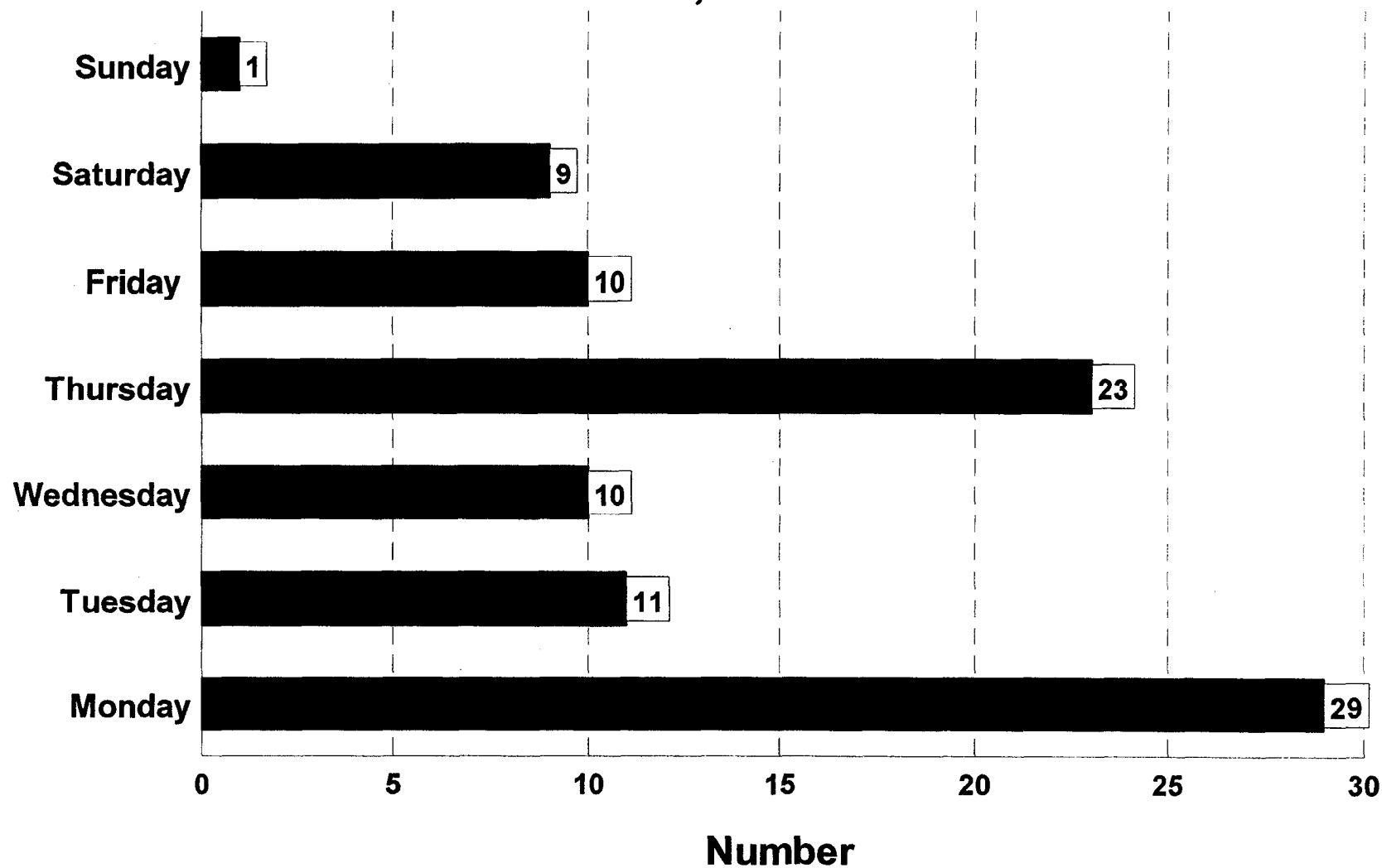
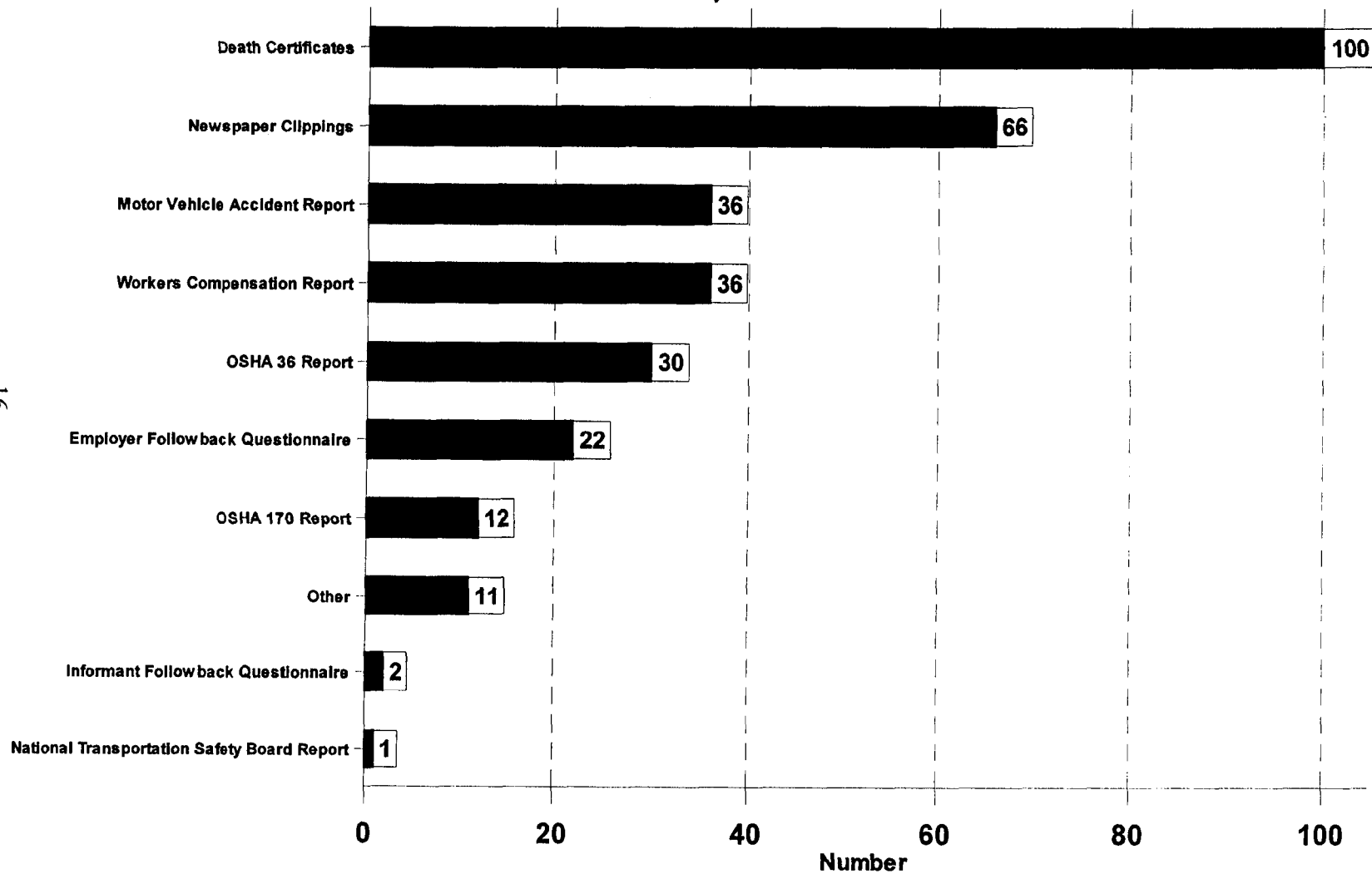


Chart 13. Number of Source Documents by Type
Kansas, 1997



SECTION TWO

TABLES

**Table 1. Fatal Occupational Injuries by Selected Characteristics
Kansas, 1997**

| Worker Characteristics | Fatalities | |
|--------------------------------|------------|------------|
| | Number | Percent |
| Total | 93 | 100 |
| Employee Status | | |
| Wage and salary workers* | 57 | 61 |
| Self-employed** | 36 | 39 |
| Sex | | |
| Men | 86 | 92 |
| Women | 7 | 8 |
| Age | | |
| Under 20 years | 5 | 5 |
| 20 to 24 years | 7 | 8 |
| 25 to 34 years | 19 | 20 |
| 35 to 44 years | 13 | 14 |
| 45 to 54 years | 24 | 26 |
| 55 to 64 years | 12 | 13 |
| 65 years and over | 13 | 14 |
| Race | | |
| White | 88 | 95 |
| Other | 3 | 3 |
| Not specified | - | - |
| Hispanic origin | | |
| Hispanic*** | 5 | 5 |

*May include volunteers and other workers receiving compensation.

**Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.

***Persons identified as Hispanic may be of any race.

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding.

SOURCE: Center for Health and Environmental Statistics, Kansas Department of Health and Environment, in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor.

**Table 2. Fatal Occupational Injuries by Industry
Kansas, 1991 - 1997**

| Industry* | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|--------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Total | 86 | 82 | 99 | 106 | 95 | 85 | 93 |
| Private Industry | 80 | 73 | 86 | 93 | 78 | 76 | 85 |
| Agriculture, forestry, and fishing .. | 23 | 23 | 36 | 23 | 17 | 18 | 22 |
| Mining | 7 | 3 | 8 | 6 | 6 | - | 7 |
| Construction | 15 | 8 | 10 | 16 | 20 | 19 | 13 |
| Manufacturing | 8 | 12 | 3 | 7 | 9 | 7 | 9 |
| Transportation & public utilities ... | 13 | 11 | 14 | 13 | 9 | 11 | 17 |
| Wholesale trade | 3 | 3 | - | 5 | 3 | 7 | 4 |
| Retail trade | 6 | 5 | 5 | 15 | 5 | 4 | 3 |
| Finance, insurance, & real estate ... | - | - | - | - | - | - | - |
| Services | 5 | 7 | 6 | 7 | 8 | 10 | 9 |
| Government** | 6 | 9 | 13 | 13 | 17 | 9 | 8 |

* Standard Industrial Classification Manual, 1987 Edition.

** Includes fatalities to workers employed by governmental organizations regardless of industry.

NOTE: A (-) indicates no data or data does not meet publication criteria.

NOTE: Totals for major categories may include subcategories not shown separately.

Percentages may not add up to totals because of rounding.

SOURCE: Center for Health and Environmental Statistics, Kansas Department of Health and Environment, in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor.

**Table 3. Fatal Occupational Injuries by Industry
Kansas, 1997**

| Industry* | Fatalities | |
|--------------------------------------------------|------------|------------|
| | Number | Percent |
| Total | 93 | 100 |
| Private Industry | 85 | 91 |
| Agriculture, forestry, and fishing | 22 | 24 |
| Agriculture production - crops | 17 | 18 |
| General farms, primarily crop | 16 | 17 |
| Agriculture production - livestock | 5 | 5 |
| Livestock, except dairy and poultry | 3 | 3 |
| Mining | 7 | 8 |
| Oil and gas extraction | 6 | 6 |
| Oil and gas field services | 5 | 5 |
| Oil and gas field services, nec | 4 | 4 |
| Construction | 13 | 14 |
| General building contractors | 5 | 5 |
| Nonresidential building construction | 4 | 4 |
| Industrial buildings and warehouses | 4 | 4 |
| Special trades contractors | 6 | 6 |
| Manufacturing | 9 | 10 |
| Printing and publishing | 3 | 3 |
| Commercial printing | 3 | 3 |
| Transportation and public utilities | 17 | 18 |
| Railroad transportation | 3 | 3 |
| Railroads | 3 | 3 |
| Trucking and warehousing | 11 | 12 |
| Trucking and courier services, except air | 11 | 12 |
| Local trucking, without storage | 6 | 6 |
| Trucking, except local | 3 | 3 |
| Wholesale trade | 4 | 4 |
| Wholesale trade - nondurable goods | 3 | 3 |
| Farm-product raw materials | 3 | 3 |
| Retail trade | 3 | 3 |
| Services | 9 | 10 |
| Government** | 8 | 9 |

*Standard Industrial Classification Manual, 1987.

**Includes fatalities to workers employed by governmental organizations regardless of industry.

NOTE: Totals for major categories may include subcategories not shown separately.

Percentages may not add to totals because of rounding.

SOURCE: Center for Health and Environmental Statistics, Kansas Department of Health and Environment, in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor.

**Table 4. Fatal Occupational Injuries by Occupation
Kansas, 1997**

| Occupation* | Fatalities | |
|-----------------------------------------------------------|------------|------------|
| | Number | Percent |
| Total | 93 | 100 |
| Managerial and professional specialty | 9 | 10 |
| Executive, administrative, and managerial | 6 | 6 |
| Managers and administrators, n.e.c. | 4 | 4 |
| Professional specialty | 3 | 3 |
| Technical, sales, and administrative support | 5 | 5 |
| Sales occupations | 3 | 3 |
| Service occupations | 3 | 3 |
| Farming, forestry, and fishing | 24 | 26 |
| Farming operators and managers | 18 | 19 |
| Farmers, except horticultural | 18 | 19 |
| Other agricultural and related occupations | 6 | 6 |
| Farm occupations, except managerial | 4 | 4 |
| Farm workers | 4 | 4 |
| Precision production, craft, and repair | 18 | 19 |
| Mechanics and repairers | 5 | 5 |
| Mechanics and repairers, except supervisors | 5 | 5 |
| Construction trades | 7 | 8 |
| Construction trades, except supervisors | 5 | 5 |
| Extractive occupations | 3 | 3 |
| Precision production occupations | 3 | 3 |
| Operators, fabricators, and laborers | 34 | 37 |
| Transportation and material moving occupations | 22 | 24 |
| Motor vehicle operators | 16 | 17 |
| Truck drivers | 14 | 15 |
| Transportation occupations, except motor vehicles | 3 | 3 |
| Rail transportation occupations | 3 | 3 |
| Material moving equipment operators | 3 | 3 |
| Handlers, equipment cleaners, helpers, and laborers | 11 | 12 |
| Construction laborers | 5 | 5 |
| Laborers, except construction | 3 | 3 |

*Based on the 1990 Occupational Classification System developed by the Bureau of the Census.

NOTE: Totals for major categories may include subcategories not shown separately.

Percentages may not add to totals because of rounding.

SOURCE: Center for Health and Environmental Statistics, Kansas Department of Health and Environment, in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor.

**Table 5. Fatal Occupational Injuries by Nature of Injury
Kansas, 1997**

| Nature of Injury | Fatalities | |
|------------------------------------------------------------------|------------|------------|
| | Number | Percent |
| Total | 93 | 100 |
| Traumatic injuries and disorders | 93 | 100 |
| Traumatic injuries to bones, nerves, spinal cord | - | - |
| Multiple traumatic injuries to bones, nerves, spinal cord | - | - |
| Open wounds | 4 | 4 |
| Gunshot wounds | - | - |
| Punctures, except bites | - | - |
| Multiple open wounds | - | - |
| Burns | 3 | 3 |
| Heat burns, scalds | 3 | 3 |
| Intracranial injuries | 23 | 25 |
| Multiple intracranial injuries | 21 | 23 |
| Multiple traumatic injuries and disorders | 28 | 30 |
| Burns and other injuries | - | - |
| Intracranial injuries and injuries to internal organs | 27 | 29 |
| Other traumatic injuries and disorders | 33 | 36 |
| Asphyxiations/strangulations, suffocations | 3 | 3 |
| Drownings | - | - |
| Electrocutions, electric shocks | - | - |
| Internal injuries to organs and blood vessels of the trunk | 27 | 29 |

NOTE: Totals for major categories may include subcategories not shown separately. Dashes indicate no data or data did not meet publication criteria. Percentages may not add to totals due to rounding.

SOURCE: Center for Health & Environmental Statistics, Kansas Department of Health and Environment in cooperation with the Bureau of Labor Statistics.

**Table 6. Fatal Occupational Injuries by Part of Body
Kansas, 1997**

| Part of Body | Fatalities | |
|------------------------------------------------------------------|------------|------------|
| | Number | Percent |
| Total | 93 | 100 |
| Head | 24 | 26 |
| Cranial region, including skull | 24 | 26 |
| Brain | 23 | 25 |
| Multiple cranial region locations | - | - |
| Neck, including throat | - | - |
| Neck, except internal location of diseases or disorders | - | - |
| Trunk | 29 | 31 |
| Chest, except internal location of diseases or disorders | 17 | 18 |
| Chest, including ribs, internal organs | 17 | 18 |
| Abdomen | - | - |
| Abdomen, except internal location of diseases or disorders | - | - |
| Multiple trunk locations | 9 | 10 |
| Body systems | 6 | 7 |
| Multiple body parts | 32 | 34 |

NOTE: Totals for major categories may include subcategories not shown separately. Dashes indicate no data or data does not meet publication criteria. Percentages may not add to total because of rounding.

SOURCE: Center for Health & Environmental Statistics, Kansas Department of Health and Environment in cooperation with the Bureau of Labor Statistics.

**Table 7. Fatal Occupational Injuries by Event or Exposure
Kansas, 1997**

| Event*or Exposure | Fatalities | |
|--------------------------------------------------------------------------|------------|------------|
| | Number | Percent |
| Total | 93 | 100 |
| Transportation incidents | 57 | 61 |
| Highway | 30 | 32 |
| Collision between vehicles, mobile equipment | 13 | 14 |
| Moving in opposite directions, oncoming | 5 | 5 |
| Moving in intersection | 8 | 9 |
| Vehicle struck stationary object or equipment on the side of the road .. | 3 | 3 |
| Noncollision | 14 | 15 |
| Jack-knifed or overturned--no collision | 13 | 14 |
| Nonhighway (farm, industrial premises) | 11 | 12 |
| Noncollision accident | 10 | 11 |
| Fell from and struck by vehicle, mobile equipment | 3 | 3 |
| Overturned | 6 | 6 |
| Aircraft | 3 | 3 |
| Worker struck by vehicle, mobile equipment | 6 | 6 |
| Worker struck in roadway | 3 | 3 |
| Worker struck in parking lot or non-road area | 3 | 3 |
| Railway | 7 | 8 |
| Collision between railway vehicle and other vehicle | 4 | 4 |
| Assaults and violent acts | 5 | 5 |
| Homicides | 3 | 3 |
| Contact with objects and equipment | 15 | 16 |
| Struck by object | 6 | 6 |
| Struck by falling object | 5 | 5 |
| Caught in or compressed by equipment or objects | 7 | 8 |
| Caught in running equipment or machinery | 3 | 3 |
| Falls | 10 | 11 |
| Fall to lower level | 10 | 11 |
| Fall from roof | 4 | 4 |
| Fall from scaffold, staging | 3 | 3 |
| Fires and explosions | 4 | 4 |
| Explosion | 4 | 4 |

*Based on the 1992 BLS Occupational Injury and Illness Classification Structures.

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding.

SOURCE: Center for Health and Environmental Statistics, Kansas Department of Health and Environment, in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor.

**Table 8. Fatal Occupational Injuries by Source of Injury
Kansas, 1997**

| Source of Injury | Fatalities | |
|-----------------------------------------------------|------------|------------|
| | Number | Percent |
| Total | 93 | 100 |
| Furniture and fixtures | - | - |
| Other fixtures | - | - |
| Lighting equipment | - | - |
| Machinery | 10 | 11 |
| Agricultural and garden machinery | 5 | 5 |
| Harvesting and threshing machinery | 3 | 3 |
| Mowing machinery | - | - |
| Plowing, planting, and fertilizing machinery | - | - |
| Construction, logging, and mining machinery | - | - |
| Loaders | - | - |
| Road grading and surfacing machinery | - | - |
| Special process machinery | 3 | 3 |
| Other special process machinery | 3 | 3 |
| Part and materials | 3 | 3 |
| Building materials - - solid elements | - | - |
| Bricks, blocks, structural stone | - | - |
| Pipes, ducts, tubing | - | - |
| Vehicle and mobile equipment parts | - | - |
| Tires, inner tubes, wheels | - | - |
| Persons, plants, animals, and minerals | 4 | 4 |
| Animals and animal products | - | - |
| Mammals, except humans | - | - |
| Food products - - fresh or processed | - | - |
| Grains, grain mill products | - | - |
| Plants, trees, vegetation - - not processed | - | - |
| Trees, logs | - | - |

Table 8. Fatal Occupational Injuries by Source of Injury, continued
Kansas, 1997

| Source of injury | Fatalities | |
|-------------------------------------------------------|------------|-----------|
| | Number | Percent |
| Structures and surfaces | 10 | 11 |
| Floors, walkways, ground surfaces | 9 | 10 |
| Floors | 5 | 5 |
| Ground | 3 | 3 |
| Parking lots | - | - |
| Structures | - | - |
| Towers, poles | - | - |
| Tools, instruments, and equipment | - | - |
| Handtools -- nonpowered | - | - |
| Vehicles | 58 | 62 |
| Air vehicle | 3 | 3 |
| Aircraft -- powered fixed wing | 3 | 3 |
| Highway vehicle, motorized | 38 | 41 |
| Automobile | 8 | 9 |
| Truck | 28 | 30 |
| Van -- passenger or light delivery | - | - |
| Offroad vehicle, nonindustrial | - | - |
| All terrain vehicle (ATV) | - | - |
| Plant and industrial powered vehicles, tractors | 10 | 11 |
| Forklift | - | - |
| Tractor | 8 | 9 |
| Rail vehicle | 5 | 5 |
| Train | 5 | 5 |
| Other sources | 5 | 5 |
| Ammunition | - | - |
| Bullets | - | - |
| Atmospheric and environmental conditions | 3 | 3 |
| Fire, flame, smoke | 3 | 3 |

NOTE: Totals for major categories may include subcategories not shown separately. Dashes indicate no data or data does not meet publication criteria. Percentages may not add up to totals due to rounding. SOURCE: Center for Health & Environmental Statistics, Kansas Department of Health and Environment in cooperation with the Bureau of Labor Statistics

SECTION THREE

APPENDIX

SCOPE OF CFOI DATA

The CFOI program includes the private sector, public sector, military, self-employed, and certain volunteers. To be included, an incident that resulted in death must have occurred in the reference state (in this case, Kansas) during the reference year (in this case, 1997), and must be work-related. If the incident occurred in a neighboring state but the death occurred in Kansas it is the neighboring state's responsibility to publish that occurrence. In the CFOI program a fatality is considered work-related only if the deceased was working for pay or other compensation at the time of the incident. Additionally, the deceased must be on the employer's premises, or, if at a different site, engaged in a work activity or present there as a condition of employment. Though the focus is primarily on injury-related deaths, illnesses that are determined to be work-related or that occurs at work, such as heart attacks, are also considered to be within the scope of the program therefore information pertaining to fatal illnesses that are recognized to be work related, or which occur at work, is also gathered by CFOI but not published in this publication. CFOI criteria are generally broader than the criteria used by Federal and State agencies administering specific laws and regulations.

COLLECTION METHODS

The CFOI program produces a single, reliable census of workplace fatalities. Currently, annual estimates of the national work related fatalities range between 3,000 and 11,000 deaths per year. Reasons for this wide range of estimates can be explained by difference in statistical methods. In most cases the estimate is based on a single source document, such as the worker's compensation reports which by definition exclude self-employed, government employees, and other specified sectors of the labor force.

To insure that fatalities are work related, cases are researched from different sources until a work relationship is either determined or rejected. Two or more independent source documents or a source and a follow-up questionnaire must document each case. Organizations providing source documents for the CFOI program and the document they provide include: Kansas Department of Health and Environment, Kansas death certificates; Kansas Department of Human Resources, Division of Worker's Compensation, fatal workers compensation reports; Occupational Safety and Health Administration, OSH-36 and OSH-170 reports; county coroners in Kansas, autopsy reports, coroners report, and toxicology reports; clipping services, newspaper clippings; and Kansas law enforcement agencies, police reports. Cases identified as in-scope are coded in detail, providing information on approximately thirty data elements collected, including information about the worker, the fatal incident, the machinery or equipment involved and the circumstances surrounding the accident.

CLASSIFICATION SYSTEMS

The CFOI program uses the following classification systems to code/classify data elements collected.

- (1) The Occupational Injury and Illness Structures, to classify the nature of the injury, part of body affected, event or exposure, source of injury, and secondary source of injury.
- (2) The 1987 Standard Industrial Classification Manual, to classify the industry of the employer.
- (3) The 1990 Bureau of the Census Alphabetical Index of Industries and Occupations, to classify the occupation of the decedent.
- (4) The Federal Information Processing Standards(FIPS) codes, to classify geographic areas.